

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A winding coil assembly of a reciprocating motor comprising:

an outer stator;

an inner stator arranged at an inner circumference surface of the outer stator with a certain air gap;

a magnet linearly and movably arranged between the outer stator and the inner stator; and

a winding coil mounted on either the outer stator or the inner stator, wherein the winding coil is formed as having a ring shape by being wound a coil with and including:

a plurality of turns of a conductive wire; and the coil is integrally molded by a molding material of coil

a self-lubricating polyamide layer surrounding the conductive wire; and

a molding material surrounding the self-lubricating polyamide layer such that the conductive wire, the self-lubricating polyamide layer and the molding material together are an integral structure, the self-lubricating polyamide layer being located between the conductive wire and the molding material.

2. (Currently Amended) The reciprocating motor winding coil assembly of claim 1, wherein the winding coil further includes a polyester imide layer in contact with a circumferential surface of the conductive wire, the self-lubricating polyamide layer being in contact with a circumferential surface of the polyester imide layer, the molding material being in contact with a circumferential surface of the self-lubricating polyamide layer~~the coil is manufactured by sequentially coating polyester imide layer and self lubricating polyamide layer~~

~~on a surface of copper wire. The winding coil assembly of claim 1, wherein the coil is manufactured by coating polyester imide layer on a surface of cooper wire, coating polyamide imide layer on a surface of the polyester imide layer, and coating self lubricating polyamide layer on a surface of the polyamide imide layer.~~

3. (Currently Amended) The reciprocating motor winding coil assembly of claim 1, ~~wherein the coil is manufactured by coating polyester imide layer on a surface of cooper wire, coating polyamide imide layer on a surface of the polyester imide layer, and coating self lubricating polyamide layer on a surface of the polyamide imide layer~~ the winding coil further includes a polyamide imide layer in contact with a circumferential surface of the conductive wire, the self-lubricating polyamide layer being in contact with a circumferential surface of the polyamide imide layer, the molding material being in contact with a circumferential surface of the self-lubricating polyamide layer.

4. (Currently Amended) The reciprocating motorwinding coil assembly of claim 1, ~~wherein the coil is manufactured by sequentially coating polyamide imide layer and self lubricating polyamide layer on a surface of copper wire~~ the winding coil further includes:

a polyester imide layer in contact with a circumferential surface of the conductive wire;

and

a polyamide imide layer in contact with a circumferential surface of the polyester imide layer,

wherein the self-lubricating polyamide layer is in contact with a circumferential surface of the polyamide imide layer and the molding material is in contact with a circumferential surface of the self-lubricating polyamide layer.

5. (Currently Amended) A winding coil assembly of a reciprocating motor comprising:
an outer stator;
an inner stator arranged at an inner circumference surface of the outer stator with a certain air gap;
a magnet linearly and movably arranged between the outer stator and the inner stator; and
a winding coil mounted on either the outer stator or the inner stator, wherein the winding coil is formed as having a ring shape by being wound a coil with and including:
a plurality of turns of a conductive wire;
a polyester imide layer surrounding the conductive wire;
a polyamide imide layer surrounding the polyester imide layer;
a self-lubricating polyamide layer surrounding the polyester imide layer; and
a molding material surrounding the self-lubricating polyamide layer such that the conductive wire, the polyester imide layer, the polyamide imide layer, the self-lubricating polyamide layer and the molding material together are an integral structure, the self-lubricating polyamide layer being located between the conductive wire and the molding material and the coil is firstly molded by a molding material and secondly molded by a die.

6. (Currently Amended) The reciprocating motor winding coil assembly of claim 5, wherein the polyester imide layer is in contact with a circumferential surface of the conductive wire, the polyamide imide layer is in contact with a circumferential surface of the polyester imide layer, and the self-lubricating polyamide layer is in contact with the polyester imide layer~~the coil is manufactured by coating polyester imide layer on a surface of copper wire, coating polyamide imide layer on a surface of the polyester imide layer, and coating self-lubricating polyamide layer on a surface of the polyamide imide layer.~~

7-10. (Cancelled)